

**Notice of Allowability**

Application No.

09/995,180

Examiner

Kandasamy Thangavelu

Applicant(s)

TILLOTSON, BRIAN JAY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to May 11, 2005.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ The drawings filed on 11 May 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*L. P. Picard*

**LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100**

## **DETAILED ACTION**

### ***Introduction***

1. This communication is in response to the Applicant's communication dated May 11, 2005. Claims 1 and 8 were amended. Claims 11 and 12 were added. Claims 1-12 of the application are pending.

### ***Drawings***

2. The drawings submitted on May 11, 2005 are accepted.

### ***Examiner's Amendment***

3. Authorization for this examiner's amendment was given in two telephone conversations by Mr. Mark Elchuk on July 22, 2005.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to the applicants, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

4. In Claim 1:  
Replace claim 1 with:

1. A simulation system for a mobile communication network comprising:  
a simulated network including:  
a plurality of nodes each having an antenna associated therewith;  
said nodes operating to communicate with one another wherein a first portion of  
said nodes operate to communicate by synchronous communication links and a second portion of  
said nodes operate to communicate by time division multiple access (TDMA) communication  
links;  
a user specified data traffic model in communication with said simulated network for  
providing operational parameters, including a routing protocol for each said node, to simulate an  
operational environment for said simulated network; and  
a network traffic analyzer for analyzing network traffic within said simulated network  
and generating an output in accordance therewith.

In Claim 8:

Replace claim 8 with:

8. A method for simulating a mobile communication network, said method  
comprising the steps of:  
a) providing a simulated network having a plurality of nodes, wherein each said node  
includes an antenna associated therewith;

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b) forming a plurality of time division multiple access (TDMA) communication links between selected first pairs of said nodes, each of said TDMA communication links having a plurality of time slots;

c) forming a plurality of synchronous communication links between selected second pairs of said nodes;

d) using a user specified data traffic model to apply desired operating parameters to said simulated network; and

e) using a network traffic analyzer to analyze network traffic within said simulated network and generate an output in accordance therewith.

**A clean copy of the amended claims is attached.**

### ***Reasons for Allowance***

5. Claims 1-12 of the application are allowed over prior art of record.

6. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

The closest prior art of record shows:

(1) simulation of wireless transport systems replicating all time and frequency dynamics effects; the simulation comprises a communications traffic selection module, a voice and data input module to provide inputs to the network simulation module and a multipath modeling

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module to model deterministic and stochastic effects; the models generate a plurality of interference signals and display the link connectivity on the screen; they simulate a plurality of stationary and moving communication platforms and nodes; nodes form communication centers from which information either originates or terminates; nodes include radio, cellular phone, repeater, switch or computer terminal; simulation of a plurality of protocols and a plurality of networking capabilities such as routing is provided (**Brockel et al.**, U. S. Patent 5,794,128);

(2) a discrete event simulator for simulating a multimode communication network comprising a plurality of subsystem platforms, each platform including several active nodes for originating and transmitting messages to other nodes; a system controller coupled via a communication link of the simulated network to the plurality of platforms for controlling synchronization and message processing (**Liu et al.**, U. S. Patent 6,134,514);

(3) a method and apparatus for interfacing a synchronous core network with an asynchronous radio network; the radio network has a base station, the base station having a radio resource controller, a radio link controller and a media access controller; a function to map a synchronous message to an asynchronous message; a method of transmitting a message from an asynchronous radio network to a synchronous core network; mapping the asynchronous message to a synchronous message (**Park et al.**, U.S. Patent 6,853,852); and

(4) simulating a wireless communication system to produce a plurality of lists of channel rankings and assigning the lists to the base stations for use in assigning channels to service communications with mobile units; the channel rankings are produced using a learning algorithm that dynamically reduces intercommunication interferences; the cellular systems use time division multiple access (TDMA) for communication between base stations and cellular users;

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the process includes simulating the system to produce a plurality of lists of channel rankings (Kumaran et al., U.S. Patent Application 2002/0168983).

Additional state of the art reviewed and considered by the Examiner is found in U.S. Patent 6,308,072; U.S. Patent Application 2003/0097410; U.S. Patent 6,829,222; U.S. Patent Application 2002/0018448; U.S. Patent 6,643,526; U.S. Patent Application 2002/01228045; U.S. Patent Application 2001/0045494; U.S. Patent Application 2003/0086405; U.S. Patent 6,084,864; U.S. Patent 6,111,857; U.S. Patent 6,442,615; U.S. Patent 6,611,867; U.S. Patent 6,272,450; U.S. Patent 5,953,676; U.S. Patent Application 2002/0067736.

None of these references taken either alone or in combination with the prior art of record discloses a simulation system for a mobile communication network and a method for simulating a mobile communication network, specifically including:

“said nodes operating to communicate with one another wherein a first portion of said nodes operate to communicate by synchronous communication links and a second portion of said nodes operate to communicate by time division multiple access (TDMA) communication links”.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance.”

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kandasamy Thangavelu whose telephone number is 571-272-3717. The examiner can normally be reached on Monday through Friday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard, can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to TC 2100 Group receptionist: 571-272-2100.

K. Thangavelu  
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July 22, 2005